

PHILIPPINES: Mayon volcano, Albay province, Luzon, Sept. 1928 *M. Ramos* 75720; Bangui to Claveria, Ilocos norte province, Luzon, Aug. 1918, *M. Ramos* 33045.

CENTRAL NATIONAL HERBARIUM,
BOTANICAL SURVEY OF INDIA,
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34. *ACANTHUS CARDUACEUS* GRIFFITH—A SCARCELY KNOWN ENDEMIC PLANT FROM WEST BENGAL

(With a text-figure)

While collecting in the Jalpaiguri district during 1975-1976, the senior author noticed a robust scandent shrub with deeply pinnatifid, spinescent leaves and white flowers arranged in compact terminal raceme. This plant could be easily identified as *Acanthus carduaceus* described by Griffith in 1837-38 based on his own collections from Oongar, Bhutan. According to Griffith the species is a typical *Acanthus*, of the same series as the Mediterranean species which has no representative in Asia. Griffith met with it only twice in Bhutan at Bhoomlungtun and Oongar. After Griffith, this species has been collected by I. E. White in 1905 again from Bhutan at Punakha and for the first time from India by K. P. Biswas in 1934 after a gap of about 97 years. But unfortunately this extension of distribution was not recorded. Yamazaki in his 2nd report in 1971 on the Flora of Eastern Himalaya, recorded after 37 years from Birch Hills of Darjeeling at alt. 2200 m. The present collection from Jalpaiguri district confirms its occurrence in West Bengal.

A detailed description of the species together with its Pollen morphology is presented below:

Acanthus carduaceus Griff., Itin. Notes, 144. 1837-38 & Icon. Pl. Asia. t. 427. 1854; Anderson in Jour. Linn. Soc. 9 : 500. 1867; Clarke

in Hooker's Fl. Brit. Ind. 4 : 480. 1884; Yamazaki in Hara's Fl. East. Himal. Report 2 : 122. 1971.

A robust shrub of about 2.5 m high, somewhat scandent; leaves large, 30-45 cm long, pinnatifid with toothed spinous lobes; inflorescence a terminal raceme, 15-28 cm long, compact with bracts and bracteoles; bracts four-sided, ovate-lanceolate, 2-3 cm × 1-2 cm, acuminate, dentate; bracteoles 2, lanceolate, 1-1.5 cm × 0.5-0.8 cm, acuminate, ciliate; flowers white, 2.5-3 cm long, subsessile to shortly pedicelled, 2-3 mm long; calyx of 4 sepals, heteromorphic, lanceolate to elliptic-lanceolate, 1.2-2 cm × 0.5-0.8 cm, acuminate, ciliate throughout, outer 2 sepals larger than inner 2 sepals, anterior sepal shortly 2-toothed; corolla 5-lobed, minutely tubular, 5-6 mm union, free part expanded, posterior lobes 3, broader, rounded and with slightly crenate margin, anterior lobes 2, smaller, placed laterally, rounded, both throat and base villous, hairs silky; stamens 4, didymous, filament 1 cm long, stout and fleshy, swollen towards base, anthers about 3 mm long, oblong, 2-celled with longitudinal splitting; ovary ellipsoid, glabrous, style 1.5-1.7 cm long, linear, glabrous, stigma pointed, glabrous; capsule oblong, with a pointed tip, 1.5-2 cm long, obtusely 4-angular, glabrous,

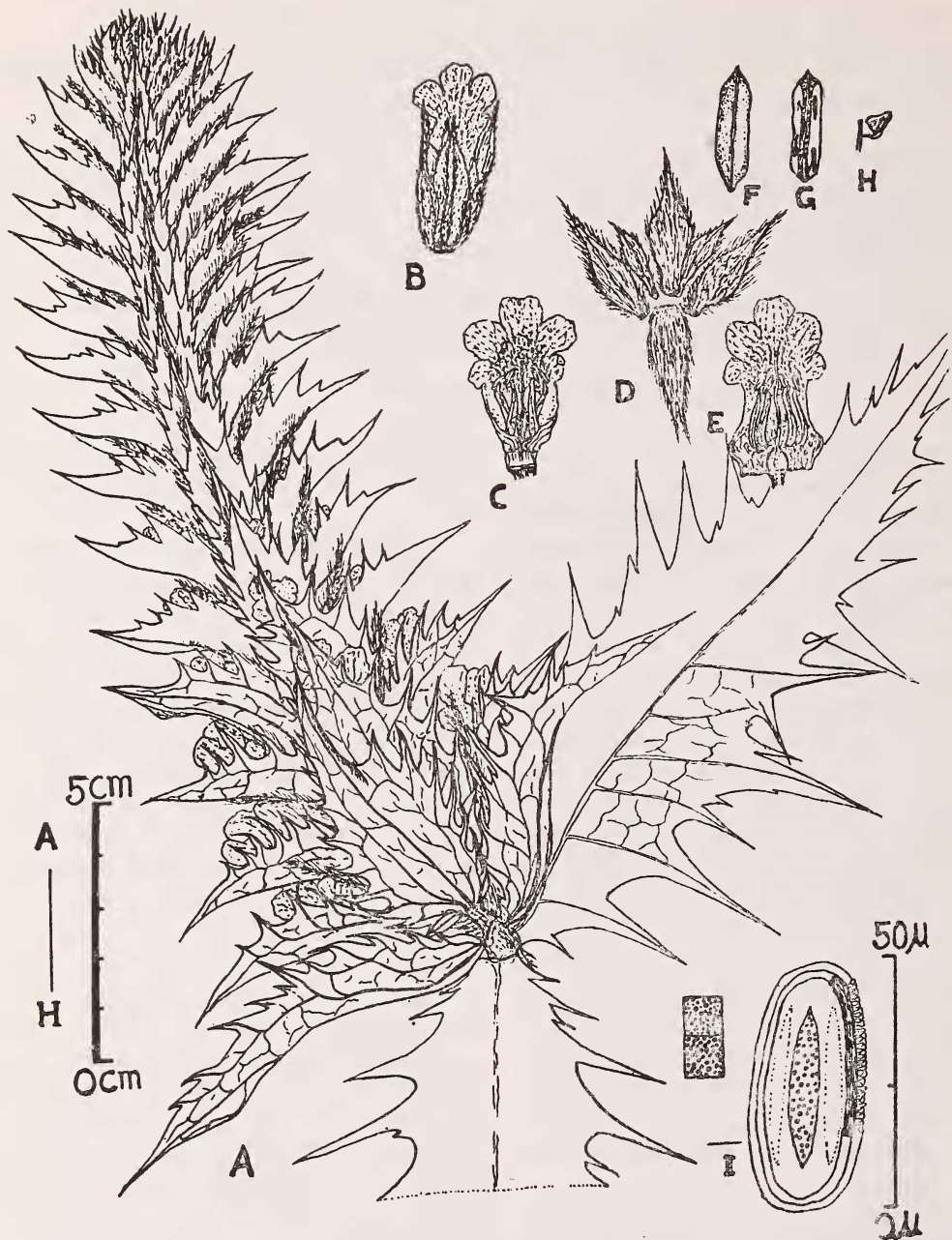


Fig. 1. *Acanthus carduaceus* Griff.: A. Inflorescence with leaves; B. Flower; C. Corolla; D. Bracts and Calyx; E. Corolla split to show stamens and carpel; F. Capsule; G. One valve of capsule; H. Seed; I. Pollen.

deep-brown, shiny, loculicidal dehiscence; seeds 4, 2-in each half, triangular, 0.6-0.8 cm diam., compressed laterally, glabrous, purple brown (fig. 1, A-H).

Pollen: Prolate, 41-49 μm \times 22-24 μm ; 3 colpate, colpa tapering, margin not entire, 21-32 μm \times 4-4.5 μm , granulated; Exine 2.5 μm ; Columella short, straight, indistinct; sexine \pm 1 μm ; nexine \pm 1.5 μm ; semitectate, finely reticulate; lumi 1 μm , muri 0.5 μm , some free bacula present in the lumi (fig. 1, D).

Flowering: November. *Fruiting*: March.

Type: Bhutan, Oongar, *Griffith* 688 (CAL).

Specimens Examined: BHUTAN: East Himalaya, Bhutan, without any precise locality, *Ex herb. East India Company 6146* (CAL); Puna-kha, 18.4.1905, I. E. White 37 (CAL). WEST BENGAL: Jalpaiguri Dist., Buxaduar, Ramiti, 29.11.1975, *Sikdar* 4034 (CAL); Buxaduar, way to Sinchula, 1450 m, 2.3.1934, *K. Biswas* 2032 (CAL).

We have come across collection of uncertain localities deposited at (CAL). The first one is labelled "*Herb. Hort. Bot. Calcuttensis* (Flora of Sikkim), *Ribu & Rhamoo* s.n." but has a

remark about its collection locality by S. K. Mukerjee (on 6th Nov. 1941) as "this has been recorded from Bhutan and from Torsa Valley in Chumbi". The second collection by *K. Thothathri* 63 (Acc. No. 339558) is most probably from Bhutan as he visited Bhutan.

Distribution: Bhutan, West Bengal.

Yamazaki (l.c.) has included Sikkim in its distribution but no representative collection was cited by him. It is not known to occur any where in Sikkim.

Rare, growing on rocky crevices on the Buxaduar hill slopes at \pm 1400 m altitude.

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35. A NOTE ON THE OCCURRENCE OF *CROTALARIA ACICULARIS* BUCH.-HAM. IN KARNATAKA AND MAHARASHTRA

(With seven text-figures)

Cooke (1901-08) and Haines (1916) did not record *Crotalaria acicularis* Buch.-Ham. from Maharashtra State. However, Gamble (1916) has recorded this species from N. Circars in Ganjam in dry forest lands and Western Ghats in Anamalai hills and Travancore. The localities cited by the earlier workers are

neither from Karnataka nor Maharashtra.

The identity of herbarium specimen (*Rao* 95536) housed in the herbarium of Western Circle (*BSI*) collected earlier from Coorg district identified as *Crotalaria albida* was critically examined and found to be *Crotalaria acicularis* Buch.-Ham. only, and is therefore a